

ABSTRACT

The present invention is directed to a frequency hopping spread spectrum transceiver. The transceiver includes a microcontroller; a transmitter having a voltage controlled oscillator, a direct digital synthesizer, and a power amplifier; and a receiver having an amplifier, a mixer, an IF amplifier, a demodulator, and a data slicer. When transmitting, the transmitter communicates a preamble over a predetermined number of preamble channels, and thereafter communicate groups of data bytes that each comprise a subset of the data message over a predetermined sequence of data channels. When receiving, the receiver investigates the predetermined number of preamble channels to search for the preamble, each of the predetermined number of preamble channels being associated with a predetermined number of data channels in each sequence of data channels. A number of bytes that comprises each group of data bytes is determined in accordance with a number of channels in the sequence of data channels and the predetermined number of times each byte of the data message is to be transmitted.